

**Natural Systems Utilities, MN (EcoCheck)**

11347 North Ave, Suite 4

Chisago City, MN 55013

Phone: 651-257-3511 • Fax: 651-257-4490



To: Credit River Township Supervisors  
Date: April 1<sup>st</sup>, 2013  
Re: Monterey Heights/South Passage System Status

**Successes and Highlights**

- It's expected that the Monterey Heights/South Passage CSTS will receive an operations award from the Minnesota Pollution Control Agency in 2012 for substantially meeting compliance limits.
- A mild winter reduced the number of frozen STEP system alarms, and overall alarms were down from previous years at the STEP and CSTS systems.

**2012 Alarms**

- 5 STEP system alarms
  - 2 alarms were due to excessive water use (from sticking toilets and issues with iron filters/water tanks).
  - 1 system had freezing issues which were resolved by working with the homeowner.
  - 2 systems had electrical malfunctions that were resolved by EcoCheck.
- 6 CSTS system alarms
  - All 6 alarms were due to storms that caused water level spikes in the tanks and which had to be monitored and manually pumped down.
- A recirculation pump was replaced at the Monterey Heights CSTS in October.

**Compliance Summary**

- The MPCA has changed the status of monitoring well GW007 to monitor-only in the newly issued 2013 permit. This well has had ongoing permit violations due to its close proximity to the operating mounds. A nitrogen mitigation plan for the South Passage CSTS will also be required, and will be completed by EcoCheck. The MPCA is not requiring the installation of a new well at this time, however if this is required in the future the installation and permitting will cost approximately \$4500.

**Flow Monitoring**

- South Passage - averaged 5,118 gpd and 256 gpd/home (Design flow is 9,000 gpd).
- Monterey Heights - averaged 5,589 gpd and 193 gpd/home (Design flow 14,400 gpd).
- Due to new permit requirements influent sampling will be increased in 2014 from once a month to twice a month, and will result in additional lab fees of approximately \$1450 per year.

**Recommended Repairs in 2013**

- Surfacing of effluent in the sand filter at South Passage is still in its initial stages. EcoCheck operators have responded by periodically moving the rock around to break up the biomat. This activity allows the Township to delay rock replacement by utilizing more of the rock surface area for treatment. We do not anticipate rock replacement to occur in 2013, but may be needed in the next two to three years.

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To: Credit River Township Supervisors

Date: April 1<sup>st</sup>, 2013

Re: Stonebridge System Status

**Successes and Highlights**

- A mild winter reduced the number of frozen STEP system alarms, and overall alarms were down from previous years at the STEP and CSTS systems.

**2012 Alarms**

- 2 STEP system alarms
  - 1 home had a broken pipe outside of the tank and was repaired by a contractor.
  - 1 septic tank cover was replaced.
- 3 CSTS system alarms
  - All 3 alarms were due to storms that caused water levels to spike in the tanks and needed to be manually pumped down.

**Compliance Summary**

- Monitoring well GW002 exceeded the nitrate limit of 10 mg/L for all three sampling events in 2012 (Apr-11.2, Jul-11.3, Oct-11.1).
  - This is likely being caused by groundwater mounding in the disposal mounds closest to the monitoring well. These disposal mounds were shut down in May to allow the groundwater mound to subside and bring the nitrate levels back into compliance.
- The current permit expires June 30<sup>th</sup>, 2014 and the permit renewal will need to be submitted by November 30<sup>th</sup>, 2013 with a fee of \$1240 and approximately \$500 labor.

**Flow Monitoring**

- The Stonebridge CSTS averaged 4,816 gpd and 166 gpd/home (Design flow is 14,400 gpd).

**Recommended Repairs in 2013**

- The MPCA requested the Township try to control rodents in and around the disposal mounds. Ongoing rodent control is accomplished by dispensing rodenticide in gopher holes during monthly mound inspections.
- The AdvanTex<sup>®</sup> fan at this site is failing and will need to be replaced in 2013 to maintain high levels of treatment in the pods. The approximate cost for this repair is \$1000.

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To: Credit River Township Supervisors

Date: April 1<sup>st</sup>, 2013

Re: Territory System Status

**Successes and Highlights**

- A mild winter reduced the number of frozen STEP system alarms, and overall alarms were down from previous years at the STEP and CSTS systems.

**2012 Alarms**

- 3 STEP system alarms
  - 1 alarm was due to a blown output fuse on a STEP system circuit board.
  - 1 alarm was due to a frozen system.
  - 1 alarm was due to a broken check valve in the pump chamber.
- 8 CSTS system alarms
  - 6 high level alarms occurred that required the recirculation tank to be manually pumped down due to a surge of incoming water.
  - 1 low level alarm occurred due to an ADV that was stuck open causing water to siphon from the dosing tank.
  - 1 alarm occurred due to a deflated MM buoy in the Territory 8 recirculation tank.

**Compliance Summary**

- Monitoring well GW002 exceeded the nitrate limit of 12 mg/L for two of the three sampling events in 2012 (Apr-17.0, Oct-14.8).
  - It's unclear where the nitrate hits are coming from because no hits have been observed at the monitoring wells located directly next to the surrounding monitoring wells.
- The current permit expires February 28<sup>th</sup>, 2014 and the permit renewal will need to be submitted by July 31st, 2013 with a fee of \$1240 and approximately \$600 labor.

**Flow Monitoring**

- Territory I – averaged 6,921 gpd and 182 gpd/home (Design Flow is 13,500 gpd).
- Territory VII – averaged 6,413 gpd and 189 gpd/home (Design Flow is 15,300 gpd).
- Territory VIII – averaged 6,125 gpd and 204 gpd/home (Design Flow is 15,300 gpd).

**Recommended Repairs in 2013**

- Ongoing rodent control is accomplished by dispensing rodenticide in gopher holes during monthly mound inspections.
- The AdvanTex<sup>®</sup> fan at the Territory I CSTS is failing and will need to be replaced in 2013. The approximate cost for this repair is \$1000.
- The damaged pipe leading from the recirculation tank to the third AdvanTex<sup>®</sup> pod should be repaired in 2013. The approximate cost for this repair is \$1200.
- The Territory 1 CSTS may need to be pumped due to high sludge accumulations at an approximate cost of \$600.